



Wireless N Adapter RNX-N2LX

User Manual



FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

CE Mark Warning

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

National Restrictions

2400.0-2483.5 MHz

Country	Restriction	Reason/remark
Bulgaria		General authorization required for outdoor use and public service
France	Outdoor use limited to 10 mW e.i.r.p. within the band 2454-2483.5 MHz	Military Radiolocation use. Refarming of the 2.4 GHz band has been ongoing in recent years to allow current relaxed regulation. Full implementation planned 2012
Italy		If used outside of own premises, general authorization is

		required
Luxembourg		General authorization required for network and service supply(not for spectrum)
Norway	Implemented	This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund
Russian Federation		Only for indoor applications

Note: Please don't use the product outdoors in France.

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Chapter 1 Overview

Thank you for choosing Rosewill's 802.11n 2T2R Wireless USB adapter – RNX-N2LX. This chapter is to introduce you more about this Wireless Adapter.

1.1 Package Content

Before getting started, please verify that your package includes the following items:

1. Rosewill 802.11n Wireless USB Adapter x 1
2. 100 cm USB cable x 1
3. NB clip-on x 1
4. Quick Installation Guide x 1
5. Resource CD x 1, including:
 - Rosewill Wireless N Client Utility and Driver
 - User Manual

Note:

Make sure that the package contains the above items. If any of the listed items are damaged or missing, please contact with your distributor.

1.2 Overview of the Product

The adapter is an 802.11n client device; it is designed to provide a high-speed and unrivaled wireless performance for your computer or notebook. With a faster wireless connection, you can get a better Internet experience, such as downloading, gaming, video streaming and so on.

With the 802.11n technology, higher throughput improvements using MIMO (multiple input, multiple output antennas), the RNX-N2LX's transfer rate up to 300Mbps for maximum throughput. It can also interoperate with other wireless (802.11b, 802.11g) products. The adapter supports WEP, WPA and WPA2 encryption to prevent outside intrusion and protect your personal information from being exposed.

The adapter is easy to install and manage. The Quick Setup Wizard guides you step-by-step through the installation process; the Rosewill Wireless N Client Utility helps you create a wireless connection immediately.

With unmatched wireless performance, reception, and security protection, the RNX-N2LX is the best choice for easily adding or upgrading wireless connectivity to your notebook and computer.

1.3 Features

- Complies with IEEE802.11n, IEEE802.11g, IEEE802.11b standards
- Supports 2T2R MIMO technology
- Supports WPA/WPA2 data security, IEEE802.1x authentication, TKIP/AES encryption, and 64/128 – bit WEP encryption
- Supports high rate of up to 300Mbps download speed for maximum throughput
- Ease to configure and provides monitoring information
- Supports Windows 2000, XP, Vista, 7
- Extended USB cable and Laptop Clip-on for easy access

1.4 Specification

Standard	RF Output Power(Typical)
IEEE 802.11n Draft 2.0 IEEE 802.11g/b	802.11b: up to 20 ± 1 dBm 802.11g: up to 17 ± 1 dBm 802.11n: up to 16 ± 1 dBm
Frequency Band	Interface
2.400GHz ~ 2.484GHz	USB rec. 2.0 A-TYPE
Data Rate	Antenna
802.11n(40MHz): up to 150/300 Mbps 802.11n(20MHz): up to 72/144 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9 & 6Mbps 802.11b: 11, 5.5, 2 and 1 Mbps with auto-rate fall back	2 x 2dBi integrated diversity antennas (SMAconnector)
Number of operation channel	Operation Voltage
2.412~2.462GHz (Canada, FCC) / 11 Channels 2.412~2.484GHz (Japan, TELEC) / 14 Channels 2.412~2.472GHz (Euro, ETSI) / 13 Channels	5V
Sensitivity	Dimension (mm)
-90dBm @ 802.11n -92dBm @ 802.11g -95dBm @ 802.11b	88(L) x 56(W) x 18(H) (not including antenna)
Security	Operation Temperature
64/128bit WEP WPA(TKIP with IEEE 802.1x) WPA2(AES with IEEE 802.1x) WPA Mixed	0°C ~ 60°C ambient temperature
Access Protocol	Storage Temperature
CSMA/CA	-20°C ~ 70°C ambient temperature

Driver support	Storage Humidity
Windows® 2000, XP 32/64, Vista 32/64, Win7 32/64	10% ~ 90% (Non-condensing)

1.5 System Requirement

You must have at least the following

- A laptop computer/desktop PC with an available USB port
- At least a 300MHz processor and 32MB of memory
- Windows OS for Win98SE, ME, 2000, XP, Vista, Win7
- A CD-ROM Drive
- USB controller properly installed and working in the computer
- A 802.11n 、802.11g or 802.11b Wireless Access Point/Router (for infrastructure Mode) or another 802.11n 、802.11g or 802.11b wireless adapter (for Ad-Hoc; Peer-to-Peer networking mode).

Chapter 2 Installation Guide

2.1 Software Installation

- Insert the Driver and Utility CD-ROM into the CD-ROM driver.
- The Wizard should run automatically, and Figure 0-1 should appear. If not, click the **Start** button and choose **Run**. In the field that appears, enter D:\autorun.exe (if "D" is the letter of your CD-ROM drive).



Figure 0-1

Next we use the USB wireless adapter installation steps as example. According to the wireless adapter installation steps, you can complete wireless adapter installing easily.

- Click "**Windows Driver**" on the Wireless Client Configuration Utility dialogue box, and then select the installing language from the next screen and click **Next** button.

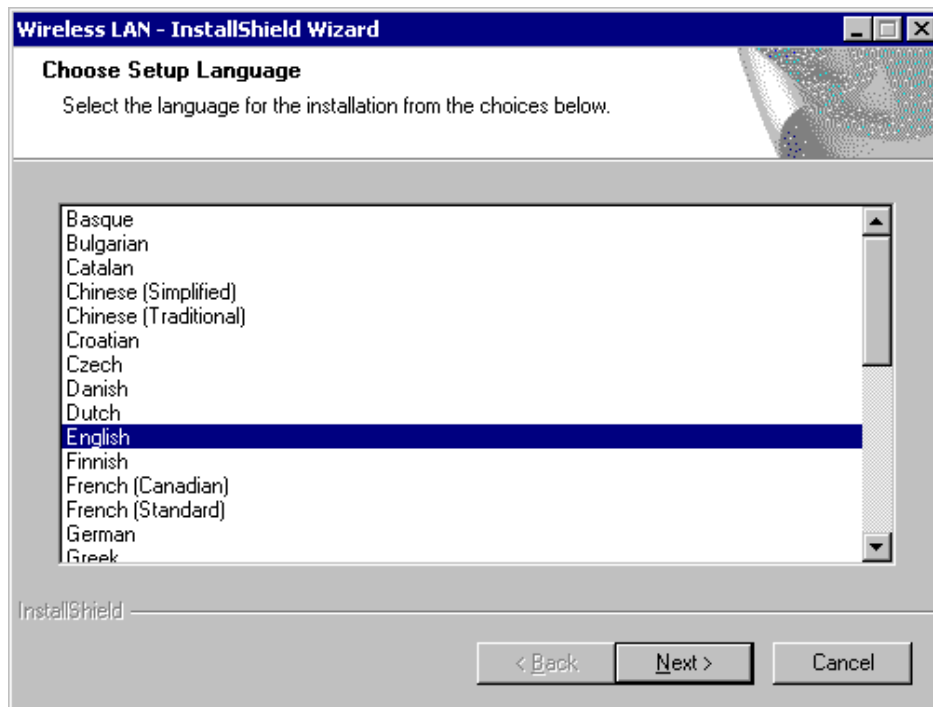


Figure 0-2

- Click **Next**

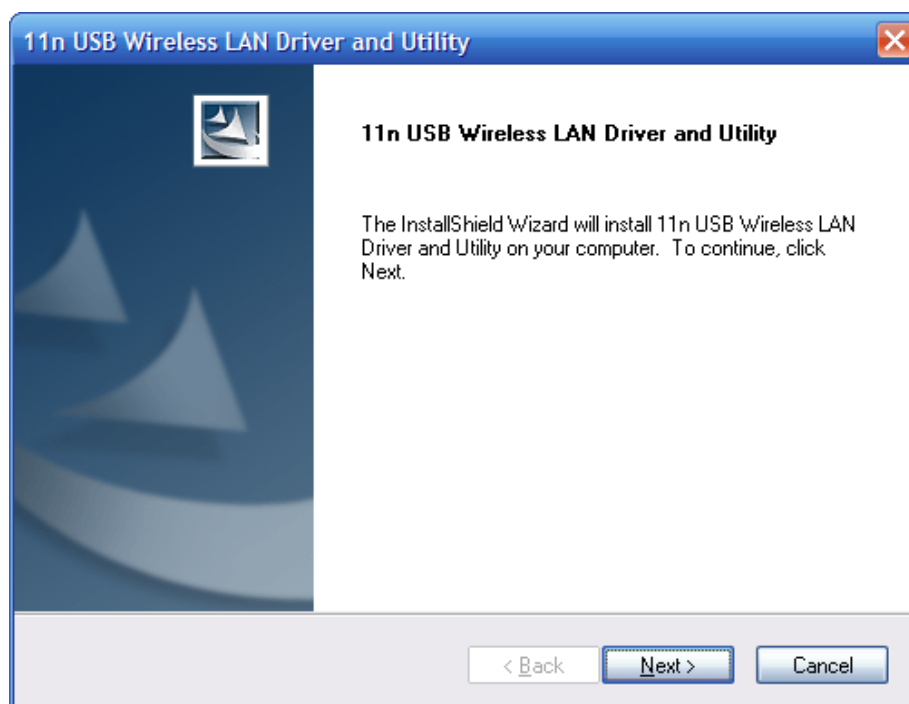


Figure 0-3

- Click **Install** to start installing

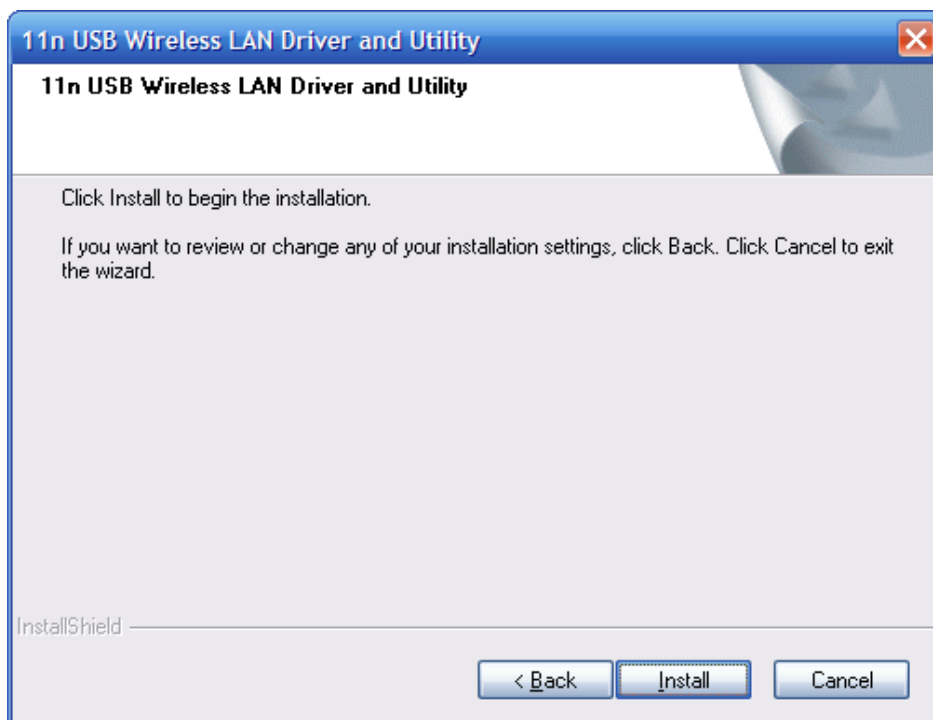


Figure 0-4

- Follow the InstallShield Wizard steps, and click **Finish** when done.

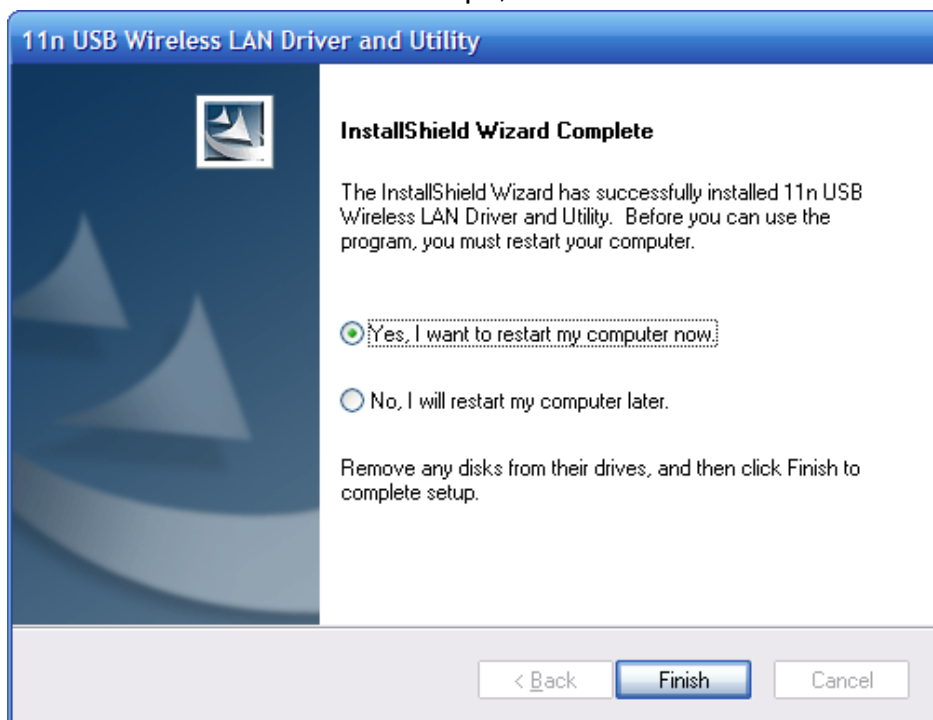


Figure 0-5

- Now your PC or notebook will restart automatically.

Chapter 3 Install Wireless Adapter

The wireless USB Adapter supports up to 300 Mbps wireless connection. This USB adapter is fully compliant with the specifications defined in IEEE802.11n standard. It is designed to complement USB2.0 computers and supports Windows98SE/Me/2000/XP/Vista/Win7.

3.1 USB adapter Installation

The status LED indicators of the USB wireless adapter are described in the following.

- Lnk/Act ON (Blue): Indicates a valid connection
- Lnk/Act Flashing: Indicates the adapter is transmitting or receiving data.



Figure 0-1

Install USB adapter

- Power on your PC, let the operating system boot up completely, and log in as needed.
- Hold the adapter and insert it into a USB slot.
- If the **Welcome to Found New Hardware Wizard** displays, choose **install the software automatically (Recommended)**, and click **Next** button. The driver will be installed automatically.



Figure 0-2

- Now you have completed the driver and hardware installation for the adapter.

Chapter 4 Configuration – Station Mode

The Wireless USB Adapter provides two modes: **Station mode** and **Access Point mode**, the default is **Station mode**. You can select remote wireless AP to connect to Internet in station mode. But in the Access Point mode, the wireless USB adapter act as a wireless access point which the wireless USB Adapter can connect to share an Internet connection with others.

Use the Wireless LAN Utility to check the link information, search for available wireless networks, or create profiles that hold different configuration settings. You can double-click the icon (**Figure 0-1**) on your desktop to run it. Another way to start the Configuration Utility is to click **Start>Programs> 11n USB Wireless LAN Utility> 11n USB Wireless LAN Utility**.

If you are using Windows XP, you can use either the Zero Configuration Utility or the Wireless Client Configuration.



Figure 0-1

4.1 General

The General tab (**Figure 0-2**) displays current basic wireless connection information.

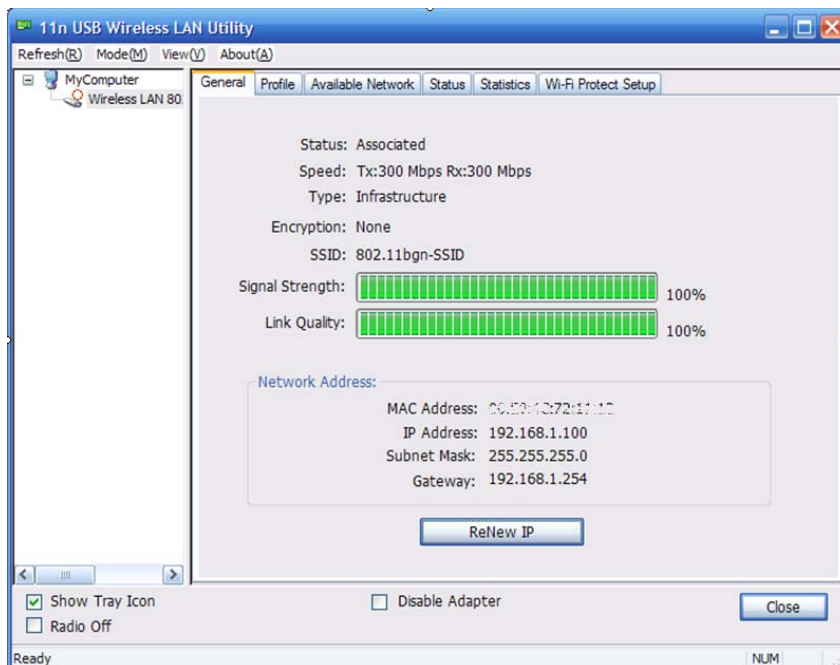


Figure 0-2

General Information

- Status: Wireless network Associated, Ad-hoc Mode or Not Associated.

- Speed: The data Tx rate and Rx rate of the current connection.
- Type: The type of the current wireless connection , Infrastructures or ad hoc
- Encryption: Current encryption.
- SSID: The unique name of the wireless network to which the wireless adapter is connecting.
- Signal Strength: The signal quality of the current connection.
- Link Quality: The link quality of the current wireless connection.

Network Address

- MAC Address: The MAC Address of the Adapter.
- IP Address: The IP Address of the Adapter.
- Subnet Mask: The Subnet Mask of the Adapter.
- Default Gateway: The Default Gateway address of the Adapter.

Others

- Show Tray Icon: Show USB Wireless LAN Utility icon in the windows taskbar notification area.
- Disable Adapter: Disable the wireless adapter.
- Radio off: Turn off the radio of the wireless adapter.

4.2 Profile

Using the Profile tab (**Figure 0-3**), you can add, remove, edit, duplicate, and set default a profile.

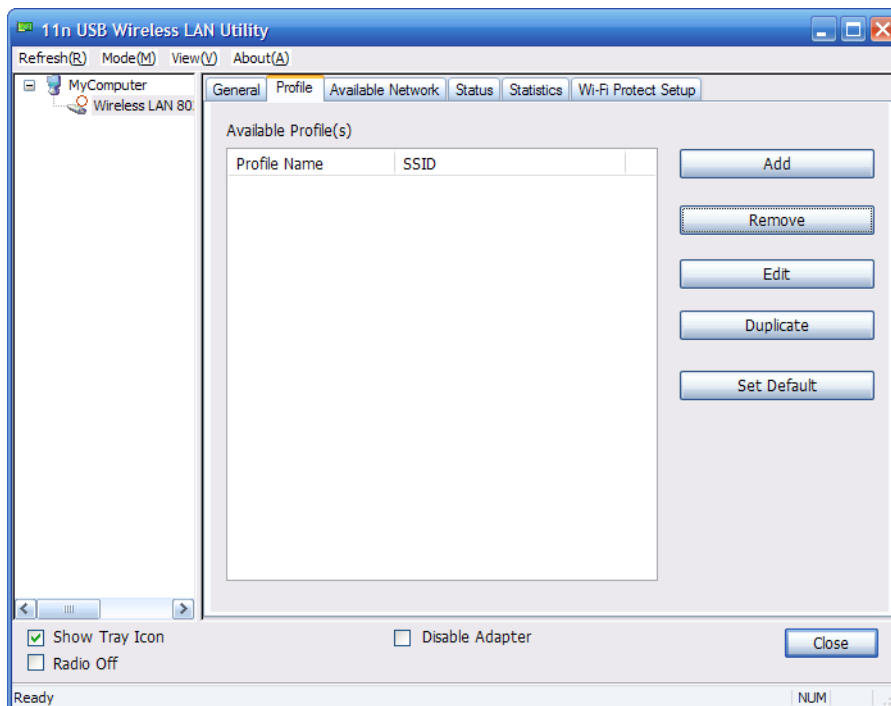


Figure 0-3

4.2.1 Add

- **Create a new Infrastructure mode profile**

If you want your wireless computers to communicate with other computers on your wired network via a wireless access point. Click the **Add** button to create a new infrastructure profile.

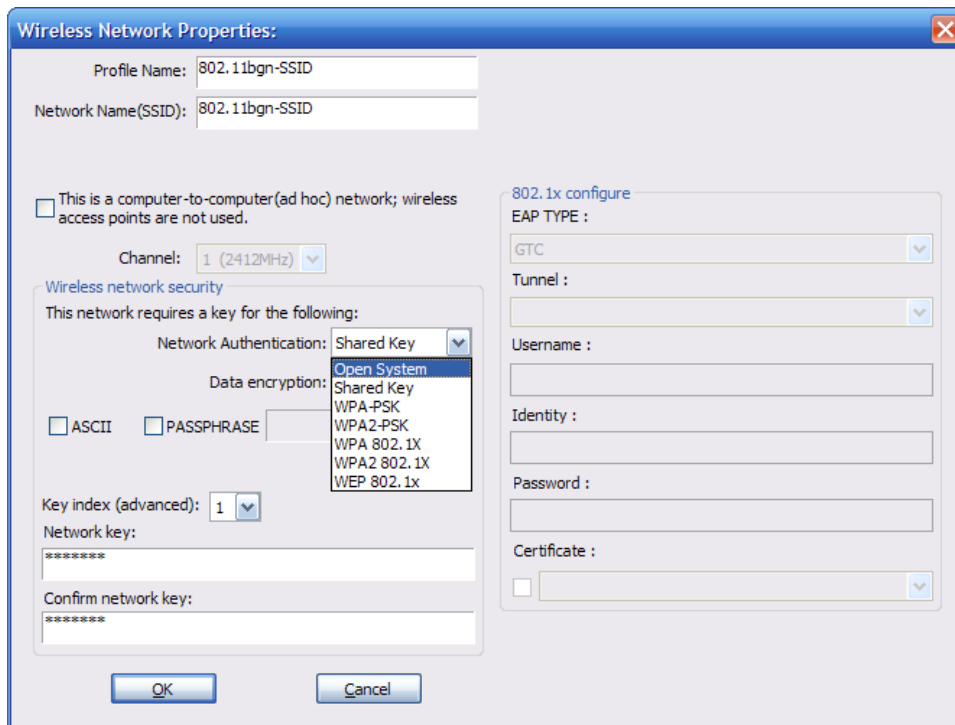


Figure 0-4

When the Network Info dialog box appears (Figure 0-4), enter a name for the new profile. Enter the Network SSID. Choose the Network Authentication Mode and Data encryption from the drop-down menu and import the network key. Then click OK button.

- **Create a new ad-hoc mode profile**

If you want your wireless computers communicate with each other directly, click the **Add** button to create a new ad-hoc profile. Then, check on below option like **Figure 4-5**:

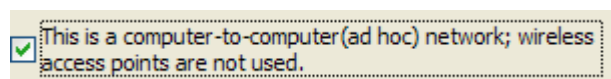


Figure 0-5

then select the correct operating channel for your network from the Channel drop-down menu.

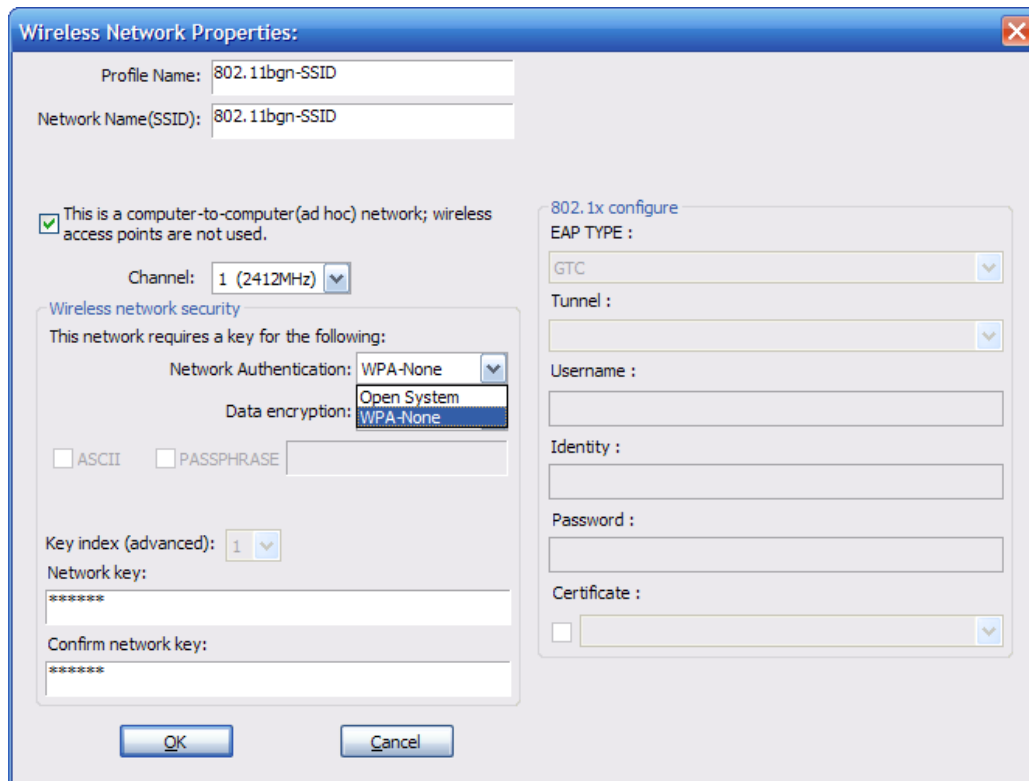


Figure 0-6

Choose the Network Authentication Mode and Data encryption from the drop-down menu. And import the network key. Then click OK button. **You have successfully created a profile.**

4.2.2 Remove

Select a profile and click **Remove** button to delete this profile (**Figure 0-7**).

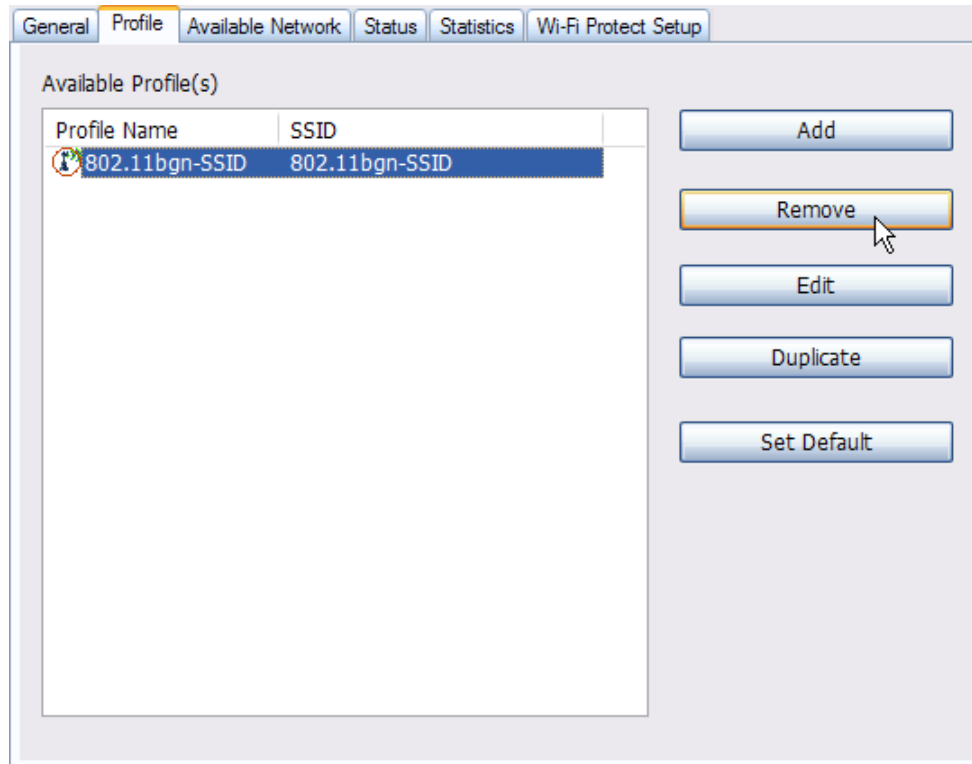


Figure 0-7

4.2.3 Edit

Select a profile and click **Edit** button to edit this profile (**Figure 0-8**).

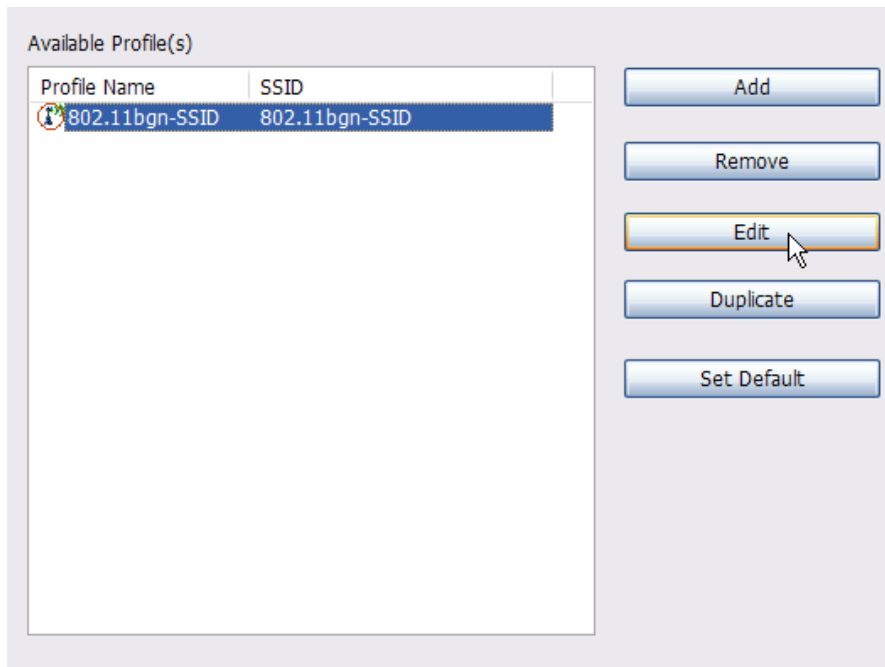


Figure 0-8

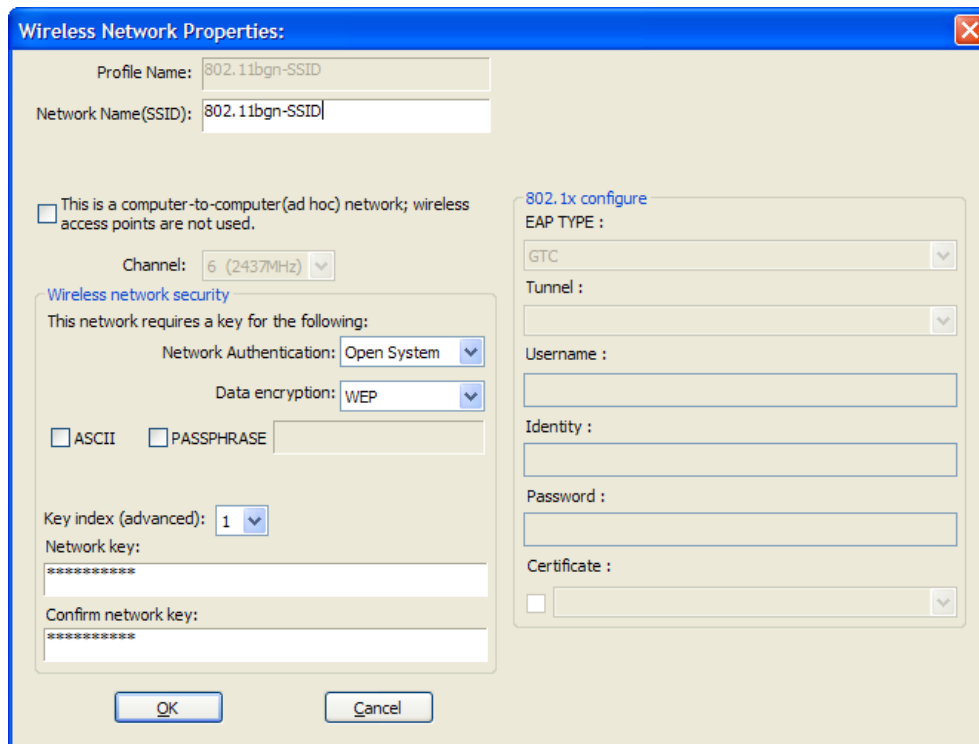


Figure 0-9

Modify the profile information according to your demand.

4.2.4 Duplicate

Select a profile which you want to copy and then click **Duplicate** (Figure 0-10)

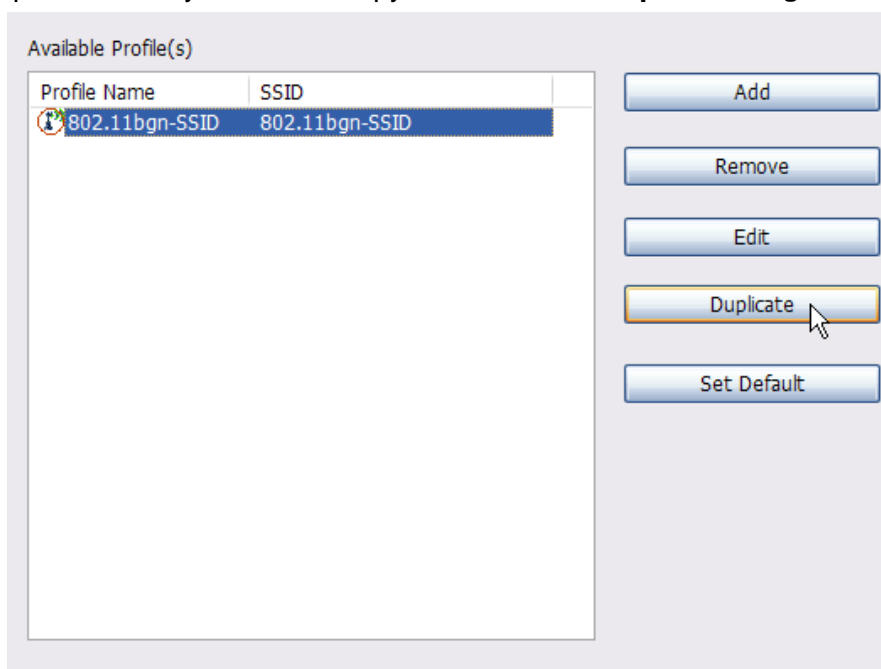


Figure 0-10

Import the new profile name in the popup window blank (Figure 0-11)

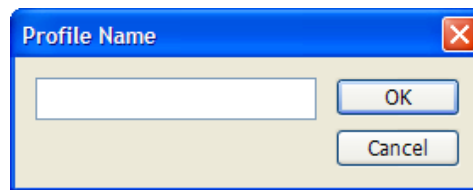


Figure 0-11

4.2.5 Set default

When you want to make one profile as a default wireless connection, you should select the profile and click **Set default** button. The wireless adapter will use this profile to connect to wireless network automatically when the utility running next time.

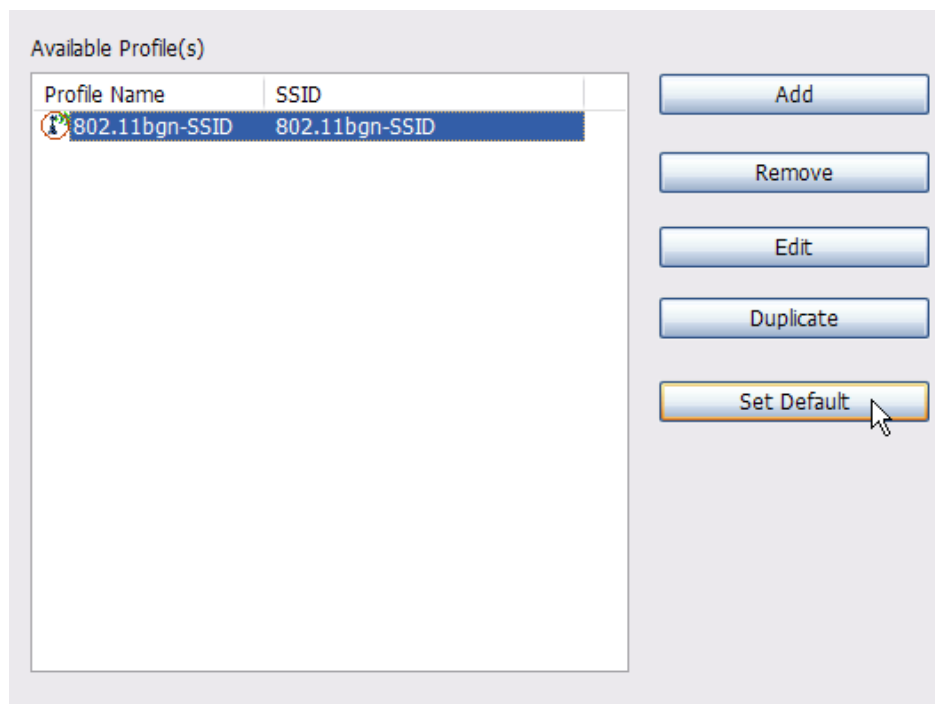


Figure 0-12

4.3 Available Network

The Available Network tab displays a list of infrastructure and ad-hoc networks for available wireless connection (**Figure 0-13**)

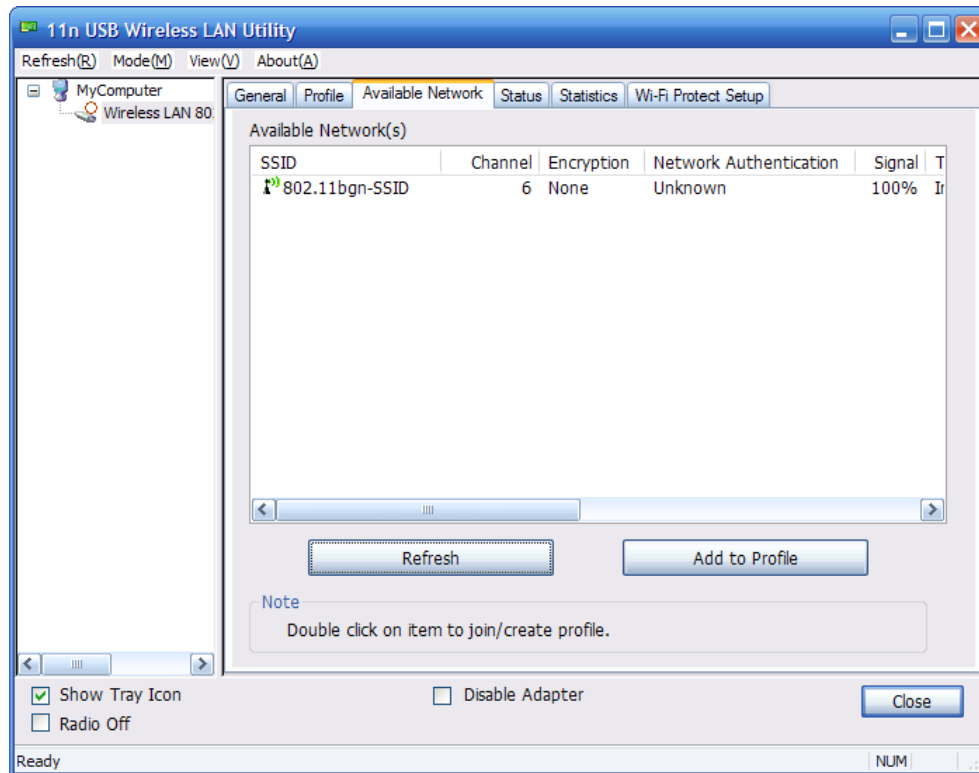


Figure 0-13

Double-click the network to which you wish to connect.

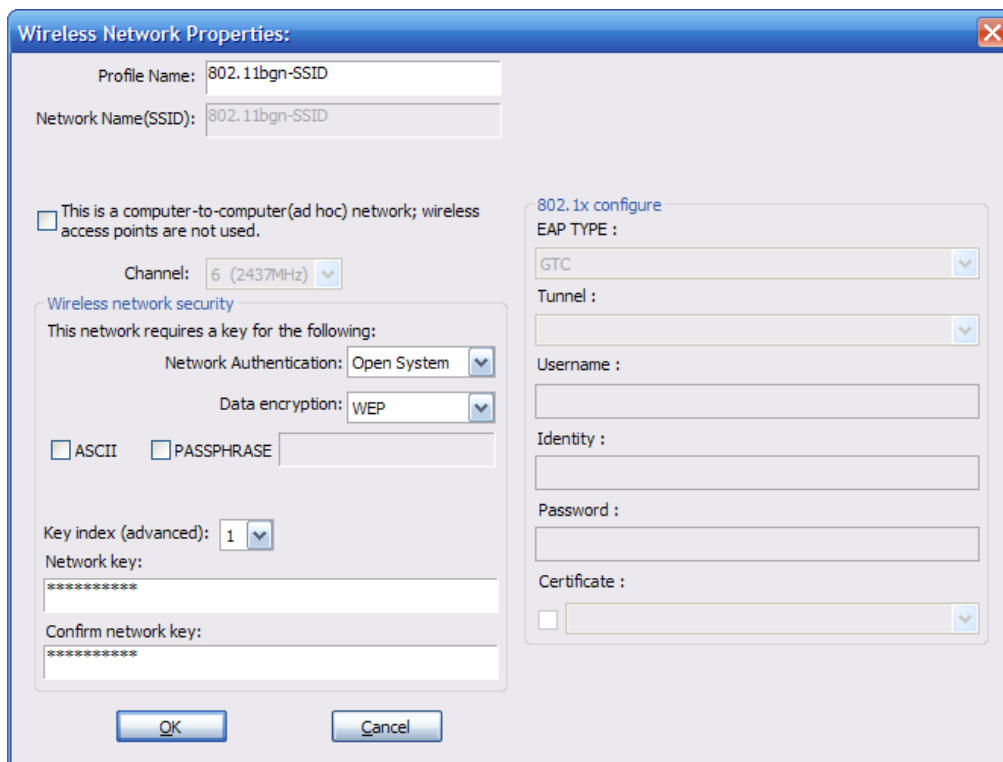


Figure 0-14

Refer to **Figure 0-14** choose the Authorization modes and Encryption modes in the drop-down box. If the wireless network uses a Passphrase, enter the Passphrase in

the Passphrase field. If the wireless network uses a WEP key, enter the WEP key in the Key field. Click the **OK** button to complete the network connection.

4.4 Status

The Status tab displays the detailed information of current device and wireless connection.

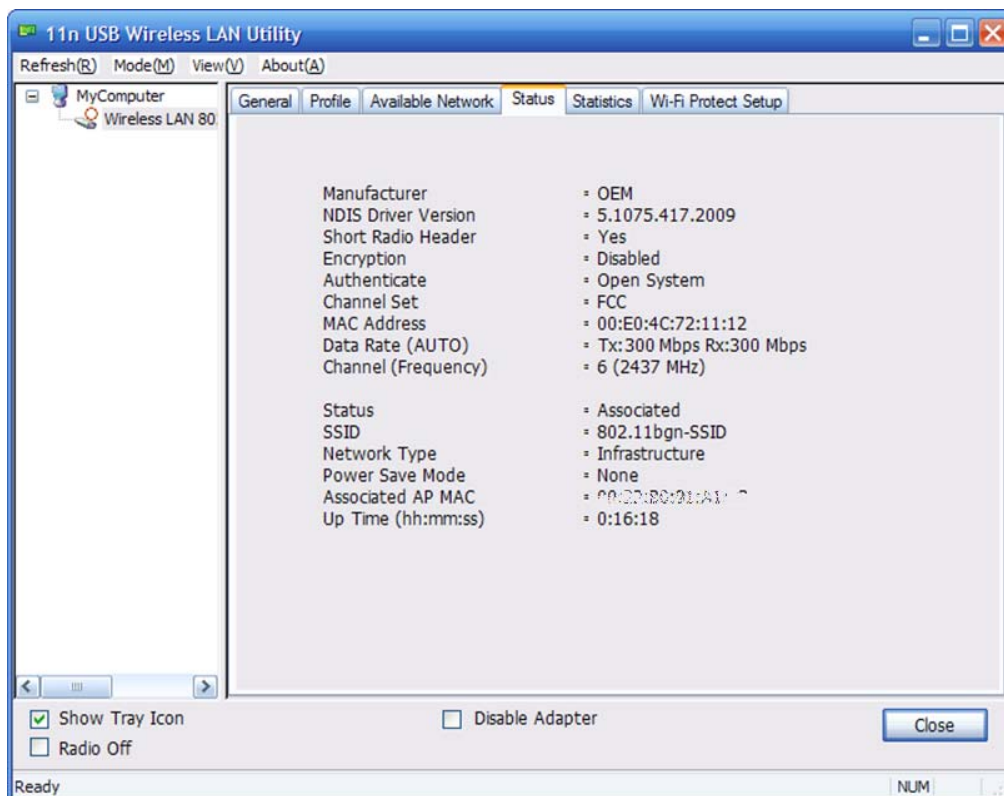


Figure 0-15

4.5 Statistics

The Statistics tab display the stat. value of current wireless connection Tx and Rx, you can click **Reset** button to reset value and restart to count.

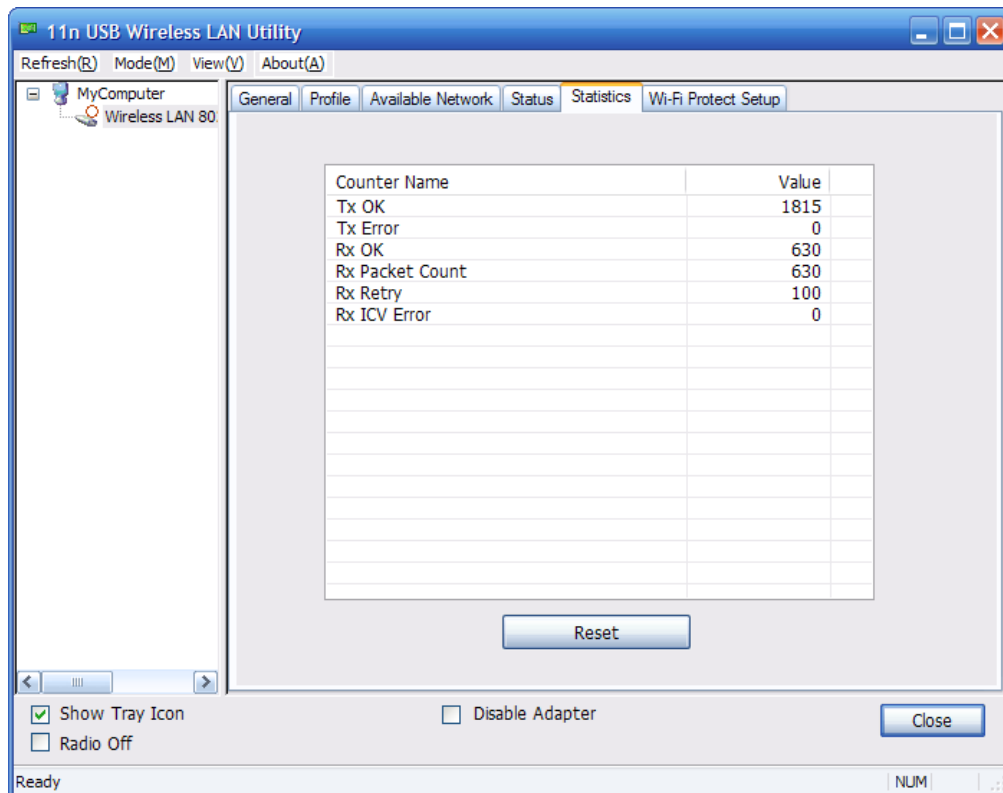


Figure 0-16

4.6 Wi-Fi Protect Setup

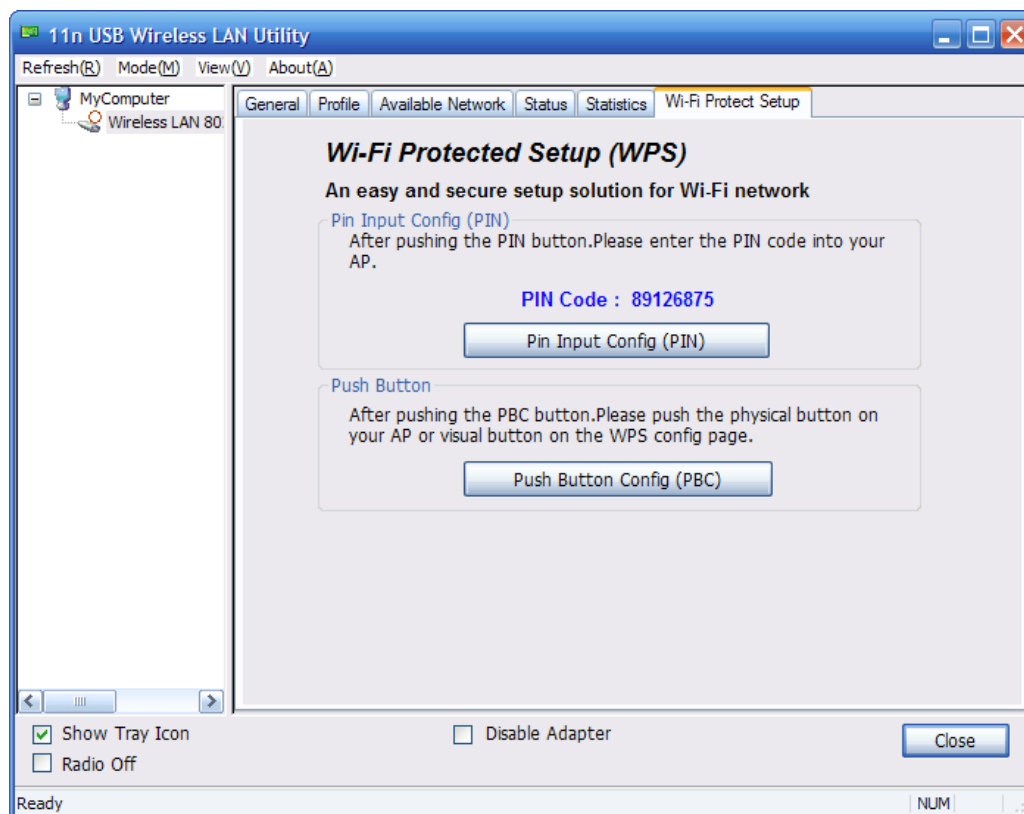


Figure 0-17

4.6.1 Method 1 PIN Input Config (PIN)

1. Input the wireless adapter's PIN Code into AP and click **Start PIN** on the AP-Router WPS configuration page

Wi-Fi Protected Setup

This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless client automatically synchronize its setting and connect to the Access Point in a minute without any hassle.

Disable WPS

WPS Status: Configured UnConfigured

Self-PIN Number: 68906818

Push Button Configuration:

Client PIN Number:

Figure 0-18

2. Click **Pin Input Config(PIN)**

Pin Input Config (PIN)
After pushing the PIN button. Please enter the PIN code into your AP.

PIN Code : 54286672

Figure 0-19

3. Select one WPS AP which you want connect to and click **Select** button

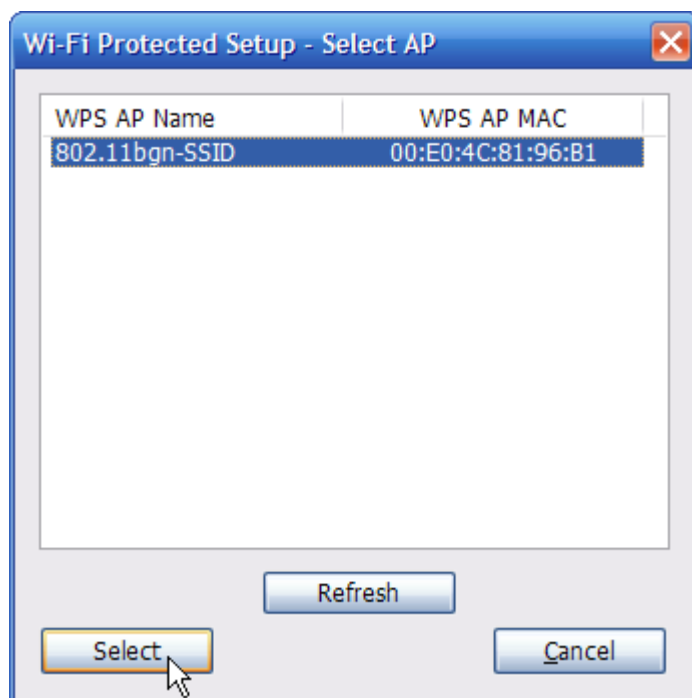


Figure 0-20

4. Please wait when the **Figure 0-21** pop-up appear, the secure connection between AP and wireless adapter will be founded automatically.

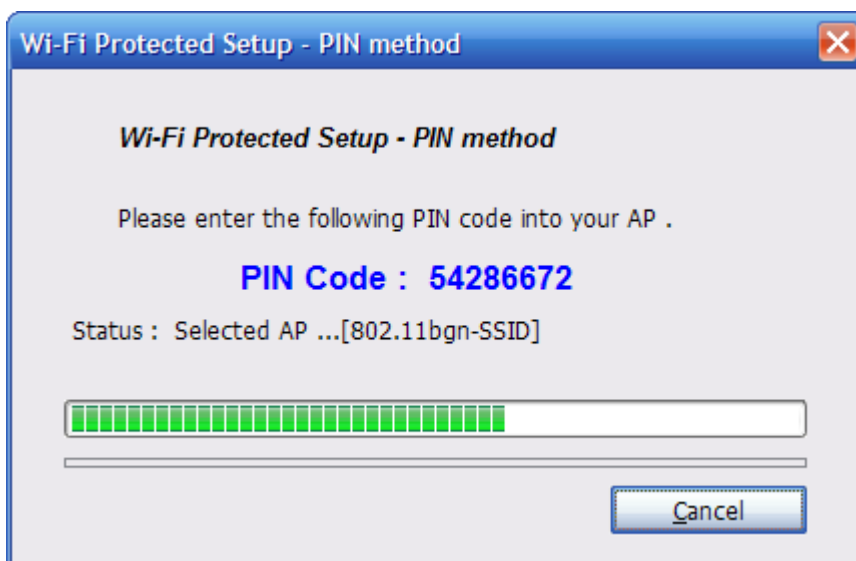


Figure 0-21

4.6.2 Method 2 Push Button

1. Click **Push Button Config(PBC)** on Wi-Fi Protect Setup page

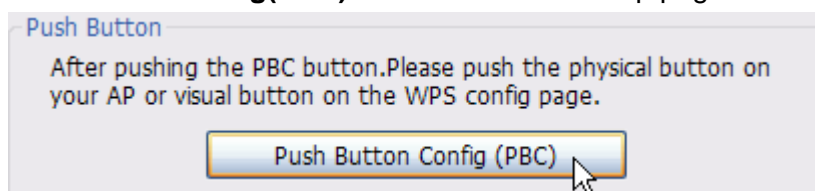


Figure 0-22

- Click **Start PBC** on the AP-Router WPS config page

Wi-Fi Protected Setup

This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless client automatically synchronize its setting and connect to the Access Point in a minute without any hassle.

Disable WPS

WPS Status: Configured UnConfigured

Self-PIN Number: 68906818

Push Button Configuration:

Client PIN Number:

Figure 0-23

- Please wait when the Figure 0-21 pop-up appear, the secure connection between AP and wireless adapter will be founded automatically.

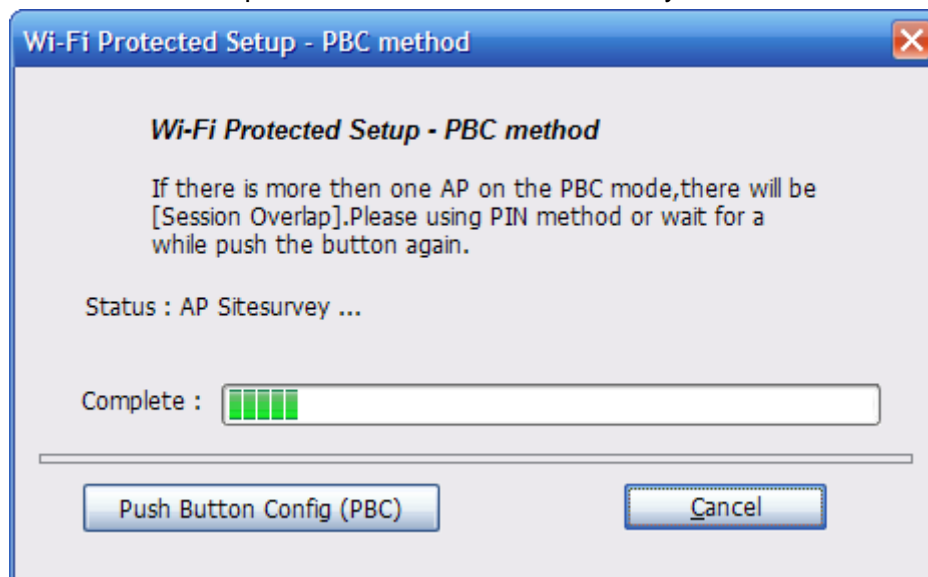


Figure 0-24

Remark

If there is more than one AP on the PBC mode, there will be session overlap. Please using method 1 PIN Input Config(PIN) or wait for a while push the button again.

Chapter 5 Access Point Mode – (Soft AP mode)

We can use the wireless USB adapter to build an access point apart from the station mode.

The wireless client can connect to it if the wireless USB adapter is set to access point mode, then you can share an Internet connection with others

Click Mode in the menu bar and select Access Point, then it will change to Access Point mode automatically

5.1 General

General displays the basic information of this AP

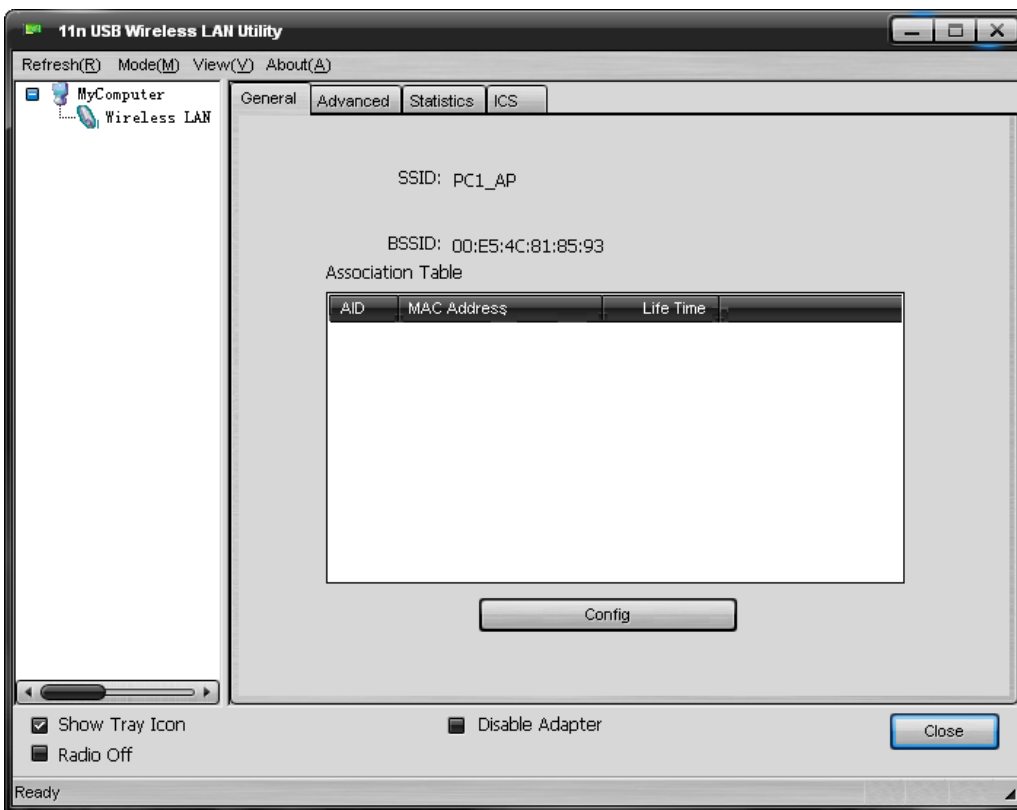


Figure 0-1

➤ SSID:

The SSID of this AP

➤ BSSID:

The MAC address of this AP

➤ Association Table:

It displays the PC's MAC address and life time that connect to this AP

➤ Config

Configure this AP. Click config, display the following picture

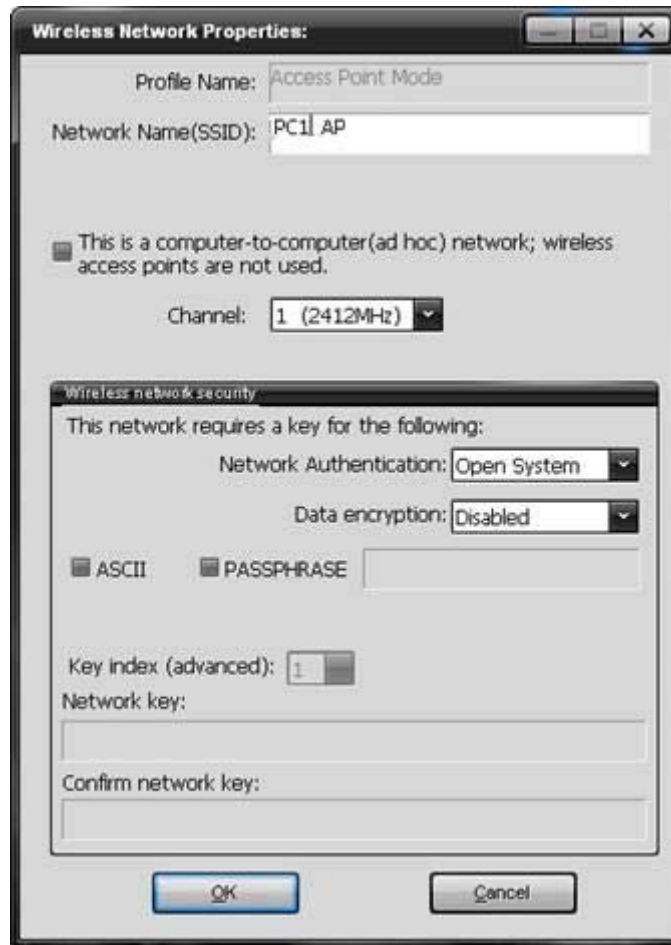


Figure 0-2

- Profile name:

The default is Access Point Mode and can't be modified

- Network name (SSID):

The name of this AP and can be modified

- Channel:

You can select channel 1 to 14, which provides a choice of avoiding interference

- Network authentication:

It contains open system, shared key, WPA-PSK and WPA2-PSK. You can configure safe encryption mode for this AP. If you select encryption mode, then you will need to enter key

5.2 Advanced



Figure 0-3

➤ Beacon Interval:

This represents the amount of time between beacon transmissions. Before a station enters power save mode, the station needs the beacon interval to know when to wake up to receive the beacon (and learn whether there are buffered frames at the access point)

➤ DTIM period:

The DTIM period is set on the TIM information element on the DTIM period field. This field is one byte and represents the number of beacon intervals that must go by before a new DTIM is sent.

➤ Preamble Mode:

“Short” is suitable for heavy traffic wireless network. “Long” provides much communication reliability; the default setting is “Short”

➤ Set defaults:

Set the options in advanced to default

➤ Apply:

Save the options

5.3 Statistics

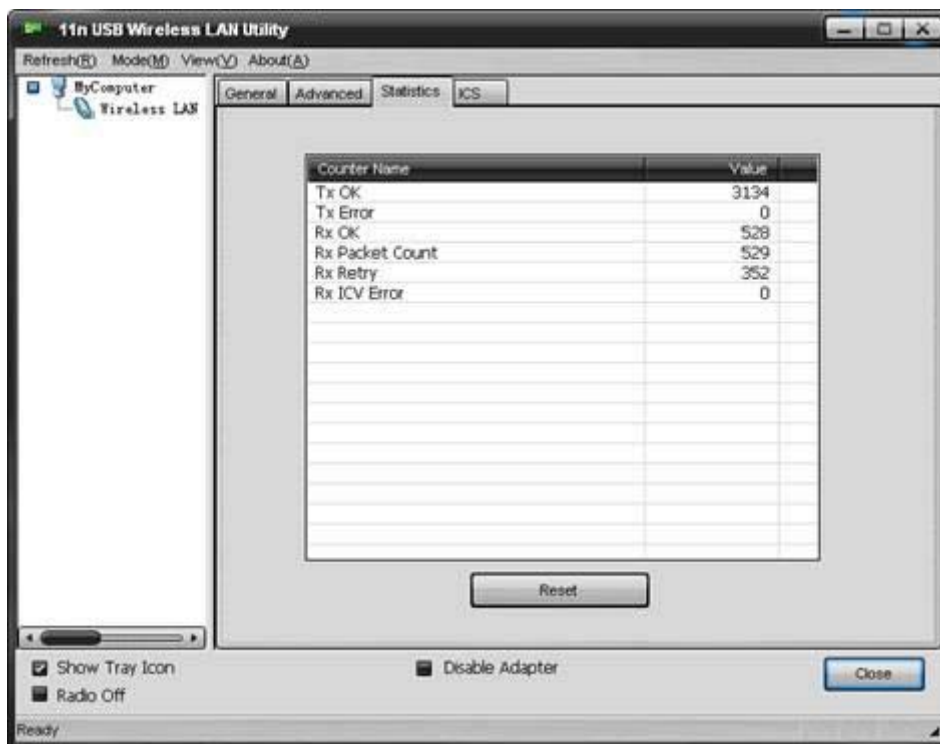


Figure 0-4

It display receive and transmit information

5.4 ICS

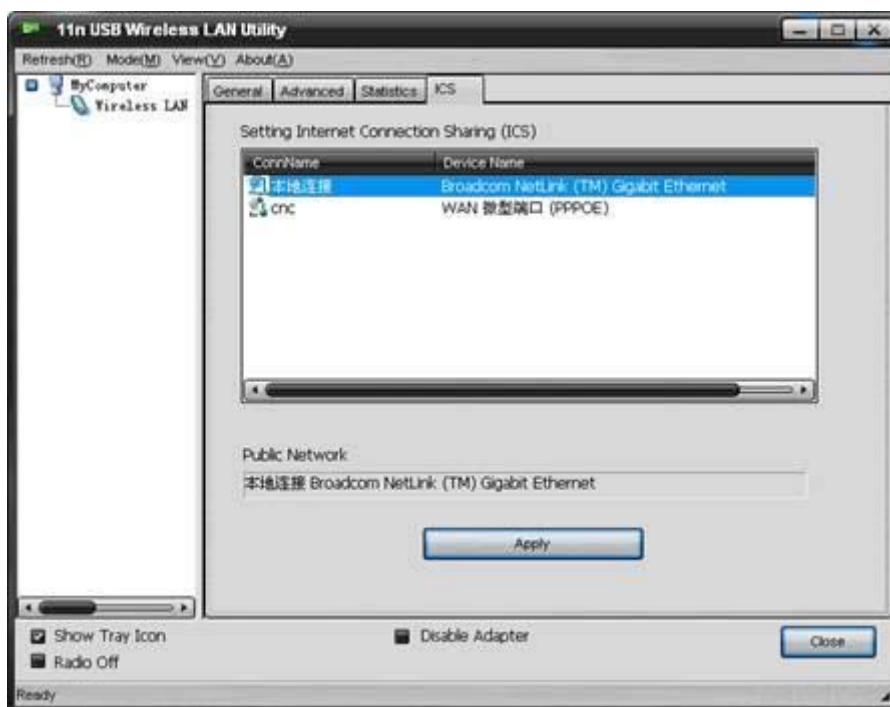


Figure 0-5

You can set internet connecting sharing (ICS), select the network you want to share in the list, then click 'apply', the following picture appears. When you connect successfully, you can share network with others

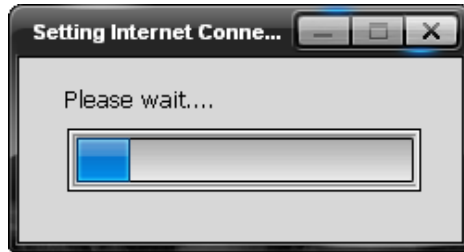


Figure 0-6

FAQ

This chapter provides solutions to problems that may occur during the installation and operation of the Wireless USB Adapter. Read the descriptions below to solve your problems.

1. The Wireless USB Adapter does not work properly.

Reinsert the Wireless USB Adapter into your PC's USB slot. Right click My Computer and select Properties. Select the device manager and click on the Network Adapter. You will find the Adapter if it is installed successfully. If you see the yellow exclamation mark, the resources are conflicting. You will see the status of the Adapter. If there is a yellow question mark, please check the following:

Make sure that you have inserted the right adapter and installed the proper driver. If the Adapter does not function after attempting the above steps, remove the adapter and do the following:

Uninstall the driver software from your PC through Control Panel's **"Add or Remove Programs"**.

Restart your PC and repeat the hardware and software installation as specified in this User Guide.

2. I cannot communicate with the other computers linked via Ethernet in the Infrastructure configuration.

Make sure that the PC to which the Adapter is associated is powered on.

Make sure that your Adapter is configured on the same channel and with the same security options as with the other computers in the Infrastructure configuration.

3. What should I do when the computer with the Adapter installed is

unable to connect to the wireless network and/or the Internet?

Check that the LED indicators for the broadband modem are indicating normal activity. If not, there may be a problem with the broadband connection.

Check that the LED indicators on the wireless router are functioning properly. If not, check that the AC power and Ethernet cables are firmly connected.

Check that the IP address, subnet mask, gateway, and DNS settings are correctly entered for the network.

In Infrastructure mode, make sure the same Service Set Identifier (SSID) is specified on the settings for the wireless clients and access points.

In Ad-Hoc mode, both wireless clients will need to have the same SSID. Please note that it might be necessary to set up one client to establish a BSS (Basic Service Set) and wait briefly before setting up other clients. This prevents several clients from trying to establish a BSS at the same time, which can result in multiple singular BSSs being established, rather than a single BSS with multiple clients associated to it.

Check that the Network Connection for the wireless client is configured properly.

If Security is enabled, make sure that the correct encryption keys are entered on both the Adapter and the access point.

Thank you for purchasing a quality Rosewill Product.

Please register your product at: www.rosewill.com for complete warranty information and future support for your product.